

IN THE CLAIMS:

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1. Lamp for vehicles including: a light conductor element (1) that has at least one light in-coupling element (3) arranged between two adjacent light out-coupling elements (2), a light source (4) associated with a light in-coupling surface (5) of the light in-coupling element (3), at least two light-diverting surfaces (6) of the light in-coupling element (3) each being respectively associated with one of the light out-coupling elements (2) and serving to divert light beams radiated from the light source (4) toward the respective light out-coupling element (2), wherein the light-diverting surfaces (6) of the light in-coupling element (3) are curved outwardly and have a common focus position (7) for the light source (4).
2. Lamp according to claim 1 wherein the light conductor element (1) is in an interior space of one of a headlight and a taillight and the light in-coupling surface (5) of the light in-coupling element (3) is arranged in a lower half of the one of the headlight and the taillight.
3. Lamp according to claim 2 wherein the light conductor element (1) is structured to have a ring-shape and has a single light in-coupling element (3), with the light in-coupling element (3) and the light out-coupling elements (2) being made of a one piece light conductor element (1), with the light source (4) being a light diode, and with the two light out-coupling elements (2) being formed from portions of the ring-shaped light conductor element (1) that border on the light in-coupling element (3) and transitioning into one another because of the ring-shaped structure of the conductor element (1).
4. Lamp as in claim 1 wherein the light conductor element (1) has a plurality of light in-coupling elements (3) spaced from one another.

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5. Lamp according to claim 1 wherein a smallest spacing of the light in-coupling surface (3) from the light-diverting surfaces (6) is a maximum of one and a half times a structural depth of the light out-coupling element (2).

6. Lamp according to claim 5 wherein the smallest spacing of the light in-coupling surface (5) from the light-diverting surfaces (6) is smaller than the structural depth of the light out-coupling element (2).

7. Lamp according to claim 1 wherein the light-conducting element (1) is associated with a reflector (8) and forms a component that covers the light source (4), with light out-coupling surfaces (10) of the light out-coupling elements (2) facing a reflection surface (9) of the reflector (8) and light beams exiting from the light out-coupling surfaces (10) falling on the reflection surface (9) of the reflector (8).

8. Lamp according to claim 1 wherein the light-diverting surfaces (6) extend parabolically, with rotation axes of the paraboloids extending into the respective out-coupling elements (2).

9. Lamp according to claim 1 wherein the light-diverting surfaces (6) extend elliptically, with the light source (4) being arranged at a common first focus position (7) of the light-diverting surfaces (6) and two focus positions (11) lying on a line that extends into the respective out-coupling elements (2).

10. Lamp according to claim 1 wherein the light in-coupling element (3) has at least three light-diverting surfaces (6), each being respectively associated with a light out-coupling element (2).

11. Lamp according to claim 1 wherein the light-diverting surfaces (6) that totally reflect light from the light source (4) are provided with at least one light decoupling element (12).
12. Lamp according to claim 1 wherein at least one of the light-diverting surfaces (6) of the light in-coupling element (3) is offset from an optical axis of the light source (4).

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